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| EXAMINER | |
|---|---|
| CROWELL, ANNA M | |
| **ART UNIT** | **PAPER NUMBER** |
| 1763 | |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/729,005 | SHIRASUNA ET AL. | |
| | Examiner | Art Unit | |
| | Michelle Crowell | 1763 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *12 April 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *28 and 29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *28-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Status of Claims*

Claims 28-29 are pending in the application. Claims 12-13 are rejected.

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 28-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 28 requires a plurality of impedance matching circuits each of which is provided to each of the plurality of different movable reactors which is indefinite. Figure 5 shows that one impedance matching circuit 101U is provided to each reactor 101. Thus, it is unclear to the Examiner whether a plurality of impedance matching circuits are provided to each reactor or an impedance matching circuit is provided to each of the plurality of reactors.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamura et al. (Japanese Patent Publication 11-319546) in view of Turlot et al. (U.S. 5,515,986).

Referring to Drawing 1, the abstract, and paragraph [0007], Okamura discloses a plasma treatment apparatus comprising a plurality of different movable reactors 1100 (i.e. capable of different processes, par. [0001]) each an evacuatable inside where at least one treatment substrate 1107 is set in; a high frequency power means 1111 for supplying high-frequency power into each movable reactor having been inside-evacuated, to cause glow discharge to take place in the movable reactor the high-frequency power supply means having a connecting portion for connecting with one of the movable reactors; an impedance regulation means 1110 provided on the side of a movable reactor in order to regulate the impedances of each reactor; and a moving means 1104 for moving the reactors, wherein each of the movable reactors and the high-frequency power supply means are provided separably and wherein one impedance regulation means is provided between a connecting portion of the high-frequency power supply means on the exterior of the moveable reactor and an electrode on the interior of the moveable reactor, wherein the high-frequency power supply means is configured to individually and detachably connect to a movable reactor (Drawings 1-2).

Okamura et al. fail to teach a plurality of impedance matching circuits each of which is provided to each of the reactors that allows for different impedance (different plasma treatments) for each of the reactors.

Referring to Figures 2a-2d, 5c, column 3, line 60 –column 4, line 20, and column 6, line 62-column 7, line 21, Turlot et al. teaches a plasma treatment apparatus having a plurality of impedance matching circuits (inductors in Fig. 5c). Additionally, each inductor is capable of providing a different impedance which results in different chamber conditions (Note. Different chamber conditions results in different process treatments) provided on the exterior of each reactor 20. By using an impedance matching circuit for each reactor, the process conditions may be adjusted for each reactor (col. 7, lines 2-9). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide each reactor of Okamura et al. with a plurality of impedance matching circuits as taught by Turlot et al. in order to adjust the process conditions for each reactor.

Furthermore, with respect to the limitation of each reactor conducting a different plasma treatment, the apparatus of Okamura et al. in view of Turlot et al. (specifically Turlot et al.) teaches that inductors allow different chamber conditions or treatments to occur. Furthermore, since the claims are directed to an apparatus, this limitation is considered an intended use limitation and a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Thus, as stated above, the apparatus of Okamura et al. in view of Turlot et al. is capable of performing the claimed different treatment for each reactor.

With respect to claim 13, Okamura et al. discloses that the substrate is an electrophotographic photosensitive member (abstract and par.[0007]). Additionally, it should be noted that the type of substrate (i.e. electrophotographic photosensitive member) used in apparatus claims is not given patentable weight (In re Young, 75 F.2d 996, 25 USPQ 69 (CCPA 1935) (as restated in In re Otto, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963))).

***Response to Arguments***

6. Applicant's arguments filed April 12, 2007 have been fully considered but they are not persuasive.

Applicant has argued that there is no suggestion to combine Okamura et al. with Turlot et al. since Okamura et al. is a system for sequentially processing substrates via movable reactors and Turlot et al. is a system for parallel processing substrate via stationary reactors. The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In the instant application, Okamura et al. discloses a plurality of different movable reactors, a high-frequency power supply means, an impedance matching circuit, and a moving means. **Turlot et al. was simply applied for the teaching that it is known in the art to provide an impedance matching circuit for different impedances to each of the plurality of different reactors.** As stated above and in Turlot et al., the motivation to combine Okamura et al. with Turlot et al. is order to adjust the process conditions for each

reactor. Thus, the combination of Okamura et al. in view of Turlot teaches a structure wherein a plurality of different movable reactors can have an impedance matching circuit for different impedances provided to each of the plurality of different reactors in order to adjust the process conditions for each reactor. Hence, the combination of Okamura et al. in view of Turlot satisfies the claimed requirement.

***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle Crowell whose telephone number is (571) 272-1432. The examiner can normally be reached on M-F (9:30 -6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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